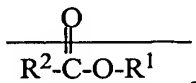
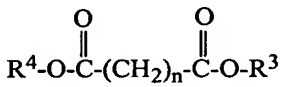
AMENDMENTS TO THE CLAIMS

1. (Currently amended) A sealant composition comprising a sealant; and an adhesion promoter containing (1) an adhesive resin in an amount of about 0.1% to about 15% by weight, based on the weight of the sealant in the sealant composition; and (2) an ester having formula [[I,]]II, III, IV or a combination of any two or more of said esters in an amount of about 0.1% to about 15% by weight, based on the weight of the sealant in the sealant composition:



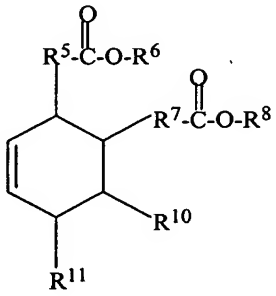
~~(I)~~

~~wherein R^1 is a C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; R^2 is a C_3-C_{24} saturated fatty acid residue, or an unsaturated fatty acid residue having 1 to 6 carbon-to-carbon double bonds;~~



(II)

wherein n=3-24, and R^3 and R^4, same or different, are a [[C_3-C_{24}]]C_6-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds;

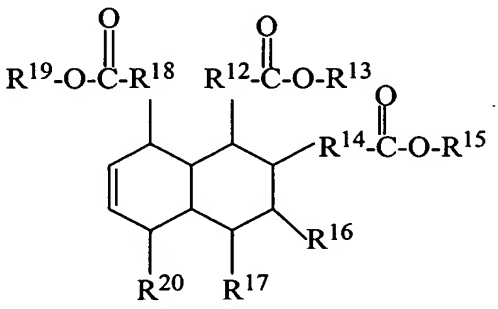


(III)

wherein R^5 and R^7, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^6 and R^8, same or different, are C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

R^{10} and R^{11}, same or different, are a C_3-C_{24}, saturated hydrocarbon chain, straight chain or branched; or an unsaturated C_3-C_{24}, hydrocarbon chain, straight chain or branched, having 1 to 6, carbon-to-carbon double bonds;



(IV)

wherein R^{12}, R^{14} and R^{18}, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

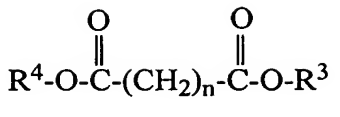
R^{13}, R^{15} and R^{19}, same or different, are a C_3-C_{24} alkyl, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

R^{16}, R^{17} and R^{20}, same or different, are a C_3-C_{24} saturated hydrocarbon chain, straight chain or branched; or unsaturated C_3-C_{24} hydrocarbon chain, straight chain or branched, containing 1 to 6 carbon-to-carbon double bonds.

2. (Currently amended) The sealant composition of claim 1, wherein the ester is selected from the group consisting of formula [[I,]]II, III, IV, and a combination of any two or more of said esters:

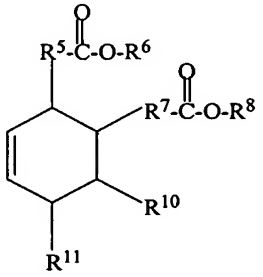
~~(I)~~

~~wherein R^1 is a C_3-C_{18} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and R^2 is a C_8-C_{18} saturated fatty acid residue, or an unsaturated fatty acid residue having 1 to 3 carbon-to-carbon double bonds;~~



(II)

wherein n=6-18, and R^3 and R^4, same or different, are a [[C_3-C_{18}]]C_6-C_{18} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds;

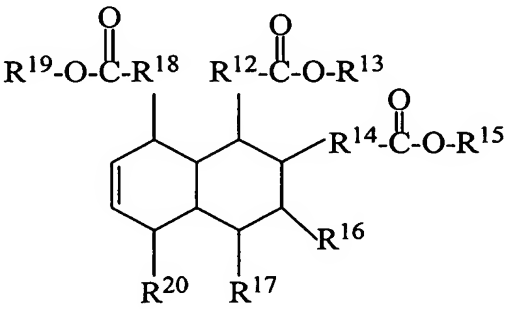


(III)

wherein R^5 and R^7, are a C_6-C_{24} hydrocarbon chain, straight chain or branched; either saturated or having 1 to 3 carbon-to-carbon double bonds;

R^6 and R^8, same or different, are a C_3-C_{18} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

R^{10} and R^{11}, same or different, are a C_3-C_{18}, saturated hydrocarbon chain, straight chain or branched; or an unsaturated hydrocarbon chain, straight chain or branched, containing 1 to 3 carbon-to-carbon double bonds;



(IV)

wherein R^{12}, R^{14} and R^{18}, same or different, are a C_8-C_{18}, hydrocarbon chain, straight chain or branched, either saturated or having 1 to 3 carbon-to-carbon double bonds;

R^{13}, R^{15} and R^{19}, same or different, are a C_6-C_{18} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

R^{16}, R^{17} and R^{20}, same or different, are a C_6-C_{18} saturated hydrocarbon chain, straight chain or branched; or an unsaturated C_6-C_{18} hydrocarbon chain, straight chain or branched, containing 1 to 3 carbon-to-carbon double bonds.

3. (Original) The sealant composition of claim 1, wherein the adhesive resin is a condensation product of a methylene acceptor and a methylene donor.

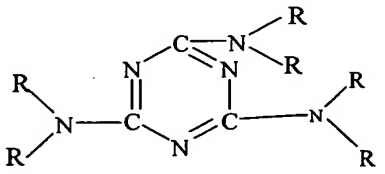
4. (Original) The sealant composition of claim 3, wherein the adhesive resin is selected from the group consisting of phenol-formaldehyde, melamine-formaldehyde; naphthol-formaldehyde; polyepoxide; a reaction product of triallyl cyanurate, resorcinol, and formaldehyde; a reaction product of p-chlorophenol, resorcinol, and formaldehyde; a copolymer of styrene, butadiene, and 2-vinylpyridine; and mixtures thereof.

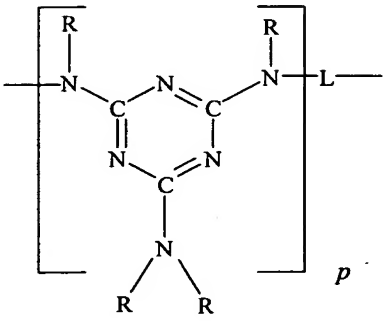
5. (Original) The sealant composition of claim 4, wherein the phenol-formaldehyde resin is resorcinol-formaldehyde.

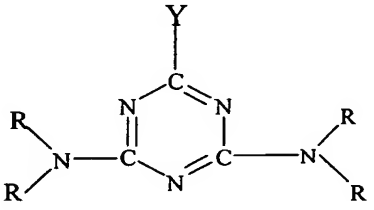
6. (Currently amended) The sealant composition of claim 1, wherein the adhesive resin is selected from the group consisting of derivatives of melamine, acetoguanamine, benzoguanamine, cyclohexylguanamine and glycoluril monomers and oligomers of these monomers, which have been substituted ~~on average~~ at two or more positions on the monomer or on each unit of the oligomer with vinyl terminated radicals, the sealant composition being free of resorcinol.

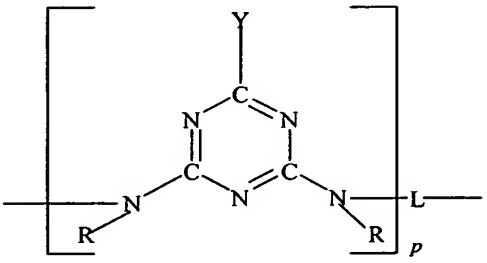
7. (Currently amended) The sealant composition of claim 6, wherein at least one of the adhesive resins has been further substituted ~~on average~~ at one or more positions with a radical which comprises carbamoylmethyl or amidomethyl.

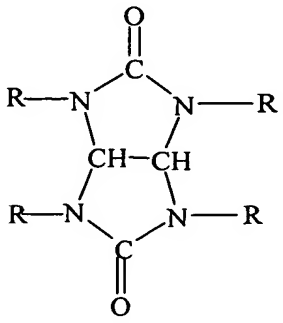
8. (Currently amended) The sealant composition of claim 6, wherein the adhesive resin is selected from compounds of the formula:

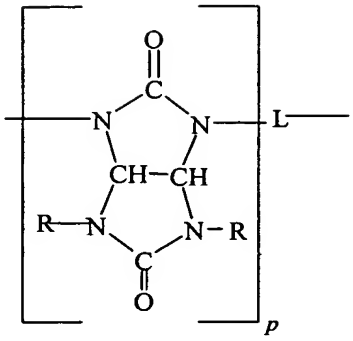












and positional isomers thereof,

wherein, in each monomer and in each polymerized unit of the oligomers, Y is selected from methyl, phenyl and cyclohexyl, and~~, on average,~~ at least two R are $-CH_2-R^1$, and any remaining R are H, and at least 2 R^1 are radicals selected from

$CH_2=C(R^2)—C(O)—O—$,

$CH_2= C(R^2)—C(O)—Z$,

$CH_2= C(R^2)—C(O)—NH—$, and

$CH_2= C(R^2)—CH_2—O—$,

wherein R^2 is hydrogen or C_1-C_{18} alkyl, and Z is a radical selected from

$—O—CH_2—CH_2—O—$,

$—O—CH_2—CH(CH_3)—O—$,

$—O—CH_2—CH_2—CH_2O—$, and

$—O—CH(C_2H_5)—O—$, and

any remaining R^1 radicals are selected from

$—O—R^3$,

$—NH—C(O)—OR^4$, and

$—NH—C(O)—R^4$, and

wherein R_3 is hydrogen or R_4, and R_4 is a C_1-C_{18} alkyl, alicyclic, hydroxyalkyl, alkoxyalkyl or aromatic radical, and in the oligomers, P is 2 to about 10, and L is methylene or the radical

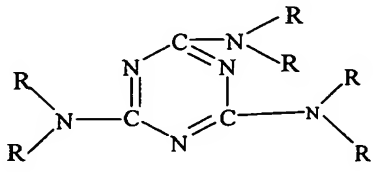
$—CH_2—O—CH_2—$.

9. (Currently amended) The sealant composition of claim 8, wherein ~~on average~~ at least one R^1 in each monomer or in each oligomerized unit of the adhesive resin is:

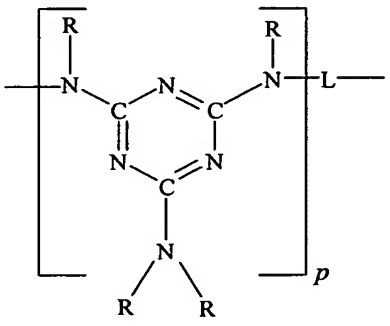
—NH—C(O)—OR^4

wherein R^4 is as defined in claim 8.

10. (Currently amended) The sealant composition of claim 9, wherein the adhesive resin is a compound of the formula



OR



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11. (Currently amended) The sealant composition of claim 10, wherein in the adhesive resin formulas, ~~on average~~ at least one R radical in each monomer or in each oligomerized unit is

—CH_2—NH—C(O) —OR^4

wherein R^4 is a C_1-C_{18} alkyl, alicyclic, hydroxyalkyl, alkoxyalkyl or aromatic radical.

12. (Currently amended) The sealant composition of claim 10, wherein ~~on average~~ at least two R radicals are selected from

CH_2=C(CH_3)—C(O)O—C_3H_6—O—CH_2—

and

$CH_2=CH_2—C(O)O—C_2H_4—O—CH_2—$and at least one R radical is selected from

$—CH_2—NH—C(O)—O—CH_3$

and

$—CH_2—NH—C(O)—O—C_3H_7$.

13. (Currently amended) The sealant composition of claim 8, further comprising an additional additive selected from hydroxymethylated and alkoxymethylated ~~(alkoxy having 1-5 carbon atoms)~~ derivatives of melamine, acetoguanamine, benzoguanamine, cyclohexylguanamine and glycoluril and their oligomers.

14. (Original) The sealant composition of claim 6, wherein the adhesive resin is a derivative of melamine or an oligomer of melamine.

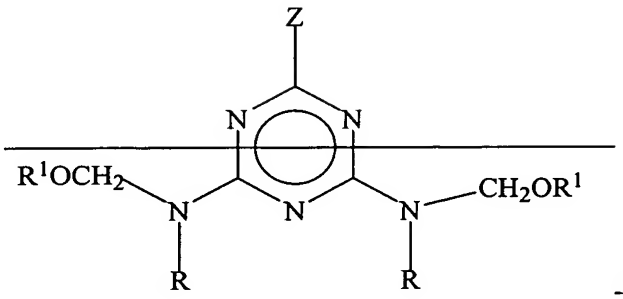
15. (Original) The sealant composition of claim 6, wherein the adhesive resin is a derivative of acetoguanamine or an oligomer of acetoguanamine.

16. (Original) The sealant composition of claim 6, wherein the adhesive resin is a derivative of benzoguanamine or an oligomer of benzoguanamine.

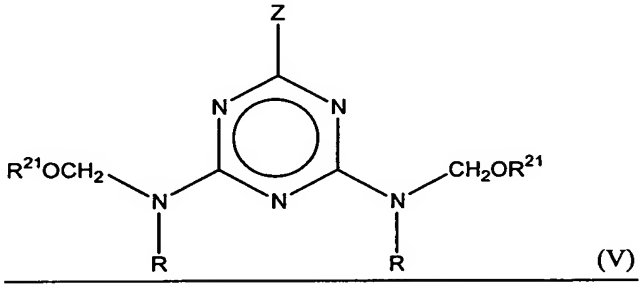
17. (Original) The sealant composition of claim 6, wherein the adhesive resin is a derivative of cyclohexylguanamine or an oligomer of cyclohexylguanamine.

18. (Currently amended) The sealant composition of claim 1, wherein the adhesive resin is a self-condensing alkylated triazine resin selected from the group consisting of (i), (ii), and (iii):

(i) a self-condensing alkylated triazine resin having at least one of imino or methylol functionality and represented by formula [[(I)]](V)



~~(I)~~



(V)

(ii) an oligomer of (i), or

(iii) a mixture of (i) and (ii), wherein

Z is ~~-N(R)(CH$_2$OR^1)-~~N(R)(CH$_2$OR^{21}), aryl having 6 to 10 carbon atoms, alkyl having 1 to 20 carbon atoms or an acetyl group,

each R is independently hydrogen or ~~-CH$_2$OR^1~~CH$_2$OR^{21}, and

each [[R^1]]R^{21} is independently hydrogen or an alkyl group having 1 to 12 carbon atoms,

provided that at least one R is hydrogen or -CH$_2$OH and at least one [[R^1]]R^{21} is selected from the alkyl group; and

wherein the sealant composition is substantially free of methylene acceptor coreactants.

19. (Original) The sealant composition of claim 18, wherein at least one R group is hydrogen.

20. (Currently amended) The sealant composition of claim 19, wherein at least one [[R^1]]R^{21} group is a lower alkyl group having 1 to 6 carbon atoms.

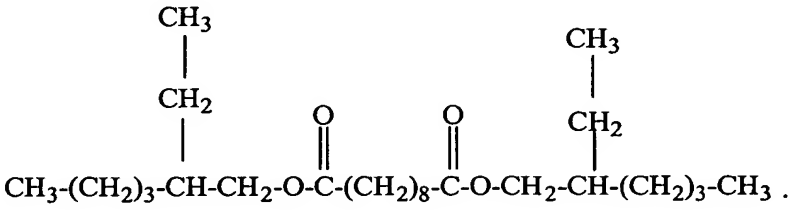
21. (Original) The sealant composition of claim 20, wherein the adhesive resin is a derivative of melamine, benzoguanamine, cyclohexylguanamine, or acetoguanamine, or an oligomer thereof.

22. (Currently amended) The sealant composition of claim 20, wherein Z is ~~-N(R)(CH_2OR^1)~~ -N(R)(CH_2OR^{21}).

23. (Original) The sealant composition of claim 4, wherein the phenol-formaldehyde resin is resorcinol-formaldehyde; and the melamine-formaldehyde resin is N-(substituted oxymethyl) melamine-formaldehyde.

24. (Original) The sealant composition of claim 1, wherein the ester has the formula II and comprises a saturated diester formed by the reaction of sebacic acid and a C_3-C_{24} alcohol, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds.

25. (Original) The sealant composition of claim 24, wherein the alcohol is 2-ethylhexyl alcohol, and the ester has the following formula:



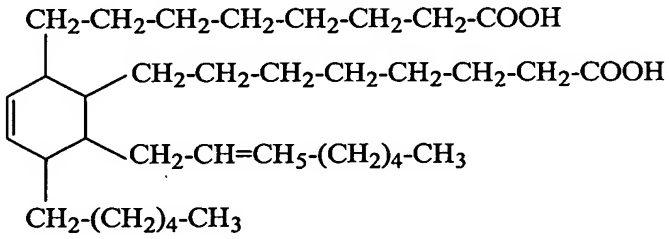
26. (Original) The sealant composition of claim 1, wherein the ester is an unsaturated diester formed by the reaction of a C_{36} dimer acid and a C_3-C_{24} alcohol, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds.

27. (Original) The sealant composition of claim 26, wherein the alcohol is 2-ethylhexyl alcohol.

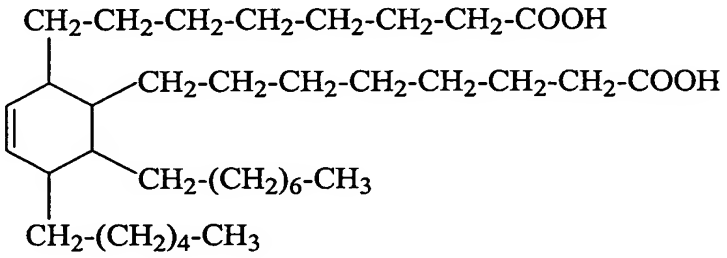
28. (Original) The sealant composition of claim 26, wherein the alcohol is tridecyl alcohol.

29. (Original) The sealant composition of claim 26, wherein the alcohol is oleyl alcohol.

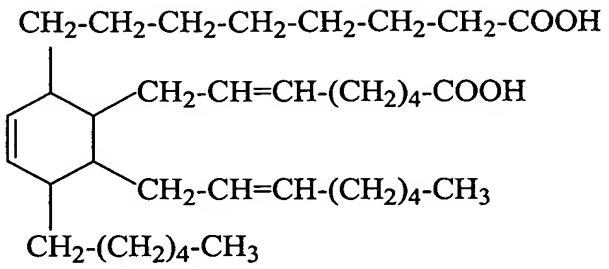
30. (Original) The sealant composition of claim 1, wherein the ester comprises the following dimer acid reacted with a C_3-C_{24} alcohol:



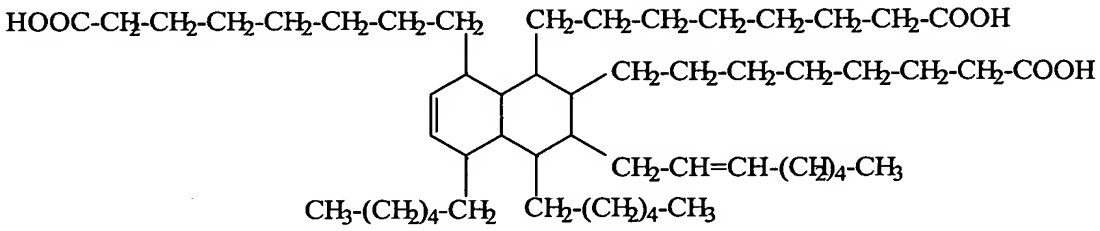
31. (Original) The sealant composition of claim 1, wherein the ester comprises the following dimer acid reacted with a C_3-C_{24} alcohol:



32. (Original) The sealant composition of claim 1, wherein the ester comprises the following dimer acid reacted with a C_3-C_{24} alcohol:



33. (Original) The sealant composition of claim 1, wherein the ester is the reaction product of a C_3-C_{24} alcohol with a tricarboxylic acid having the following formula:



34. (Currently Amended) The sealant composition of claim 1, wherein the ester is a combination of compounds of formula I, [[II,]]III, and IV.

35. (Original) The sealant composition of claim 34, wherein the ester is a reaction product of a C_3-C_{24} alcohol straight chain or branched, saturated or unsaturated having 1 to 3 carbon-to-carbon double bonds, with a dimer acid having CAS #61788-89-4.

36. (Original) The sealant composition of claim 35, wherein the alcohol is 2-ethylhexyl alcohol.

37. (Original) The sealant composition of claim 35, wherein the alcohol is a tridecyl alcohol.

38. (Original) The sealant composition of claim 35, wherein the alcohol is an oleyl alcohol.

39. (Currently Amended) The sealant composition of claim 1, wherein the ester is a combination of compounds having formula [[II,]]III, and IV.

40. (Original) The sealant composition of claim 1, wherein the ester has formula III.

41. (Original) The sealant composition of claim 1, wherein the ester has formula IV.

42. (Original) The sealant composition of claim 1, wherein the adhesion promoter is a liquid selected from the group consisting of a solvent solution and a water-based emulsion.

43. (Original) The sealant composition of claim 42, wherein the adhesion promoter is a solvent solution comprising 2-ethylhexyl alcohol.

44. (Original) The sealant composition of claim 1, wherein the adhesion promoter is mixed with a solid, inert carrier.

45. (Original) The sealant composition of claim 44, wherein the solid, inert carrier is calcium silicate.

46. (Original) The sealant composition of claim 1, further comprising a reactive diluent in an amount of about 0.5% to about 50% by weight, based on the total weight of the adhesion promoter.

47. (Original) The sealant composition of claim 46, wherein the reactive diluent is a monomer selected from the group consisting of (1) a glycidyl ether; (2) a diglycidyl ether; (3) an aliphatic, straight chain epoxide; (4) an epoxidized vegetable oil; (5) a cycloaliphatic epoxy; (6) a glycidyl ester; (7) a diglycidyl ester; and any combination thereof.

48. (Original) The sealant composition of claim 1, wherein the sealant comprises a polymer having a molecular weight between about 5000 grams/mol and about 100,000 grams/mol, and a curing agent for the polymer.

49. (Original) The sealant composition of claim 48, wherein the sealant is selected from the group consisting of synthetic polymers and natural polymers.

50. (Original) The sealant composition of claim 49, wherein the polymer is a synthetic sealant polymer selected from the group consisting of silicones, butyl rubbers, acrylics, urethanes, and modified urethanes.

51. (Original) The sealant composition of claim 1, wherein the R^2, R^5, R^7, R^{12}, R^{14} are fatty acid residues derived from animal or vegetable fatty acids.

52. (Original) The sealant composition of claim 51, wherein the fatty acids are selected from the group consisting of butter; lard; tallow; grease; herring; menhaden; pilchard; sardine; babassu; castor; coconut; corn; cottonseed; jojoba; linseed; oiticia; olive; palm; palm kernel; peanut; rapeseed; safflower; soya; sunflower; tall; tung; and mixtures thereof.

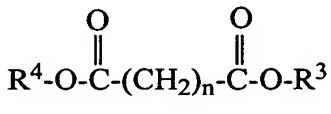
53. (Original) The sealant composition of claim 52, wherein the fatty acid residues are selected from the group consisting of hexanoic; octanoic; decanoic; dodecanoic; 9-dodecenoic; tetradecanoic; 9-tetradecenoic; hexadecanoic; 9-hexadecenoic; octadecanoic;

9-octadecenoic; 9-octadecenoic, 12-hydroxy; 9, 12-octadecadienoic; 9, 12, 15-octadecatrienoic; 9, 11, 13-octadecatrienoic; 9, 11, 13-octadecatrienoic, 4-oxo; octadecatetrenoic; eicosanoic; 11-eicosenoic; eicosadienoic; eicosatrienoic; 5, 8, 11, 14-eicosatetraenoic; eicosapentaenoic; docosanoic; 13-docosenoic; docosatetraenoic; 4, 8, 12, 15, 19-docosapentaenoic; docosahexaenoic; tetracosenoic; and 4, 8, 12, 15, 18, 21-tetracosahexaenoic.

54. (Currently amended) A method of increasing the adhesion of a sealant composition to a ceramic, glass, metal, polymeric, cementitious, or asphaltic substrate, said sealant composition comprising a sealant and an adhesive resin, the method comprising ~~adding to~~ mixing with said sealant composition, in an amount of about 0.1% to 15% by weight, based on the weight of the sealant in the sealant composition, an ester having formula [[I,]]II, III, IV, or mixtures thereof:

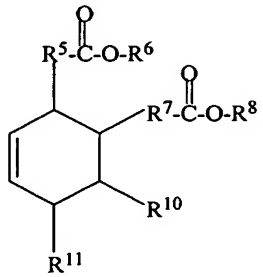
~~R^2-C(=O)-O-R^1~~

~~wherein R^1 is a C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; R^2 is a C_3-C_{24} saturated fatty acid residue, or an unsaturated fatty acid residue having 1 to 6 carbon-to-carbon double bonds;~~



(II)

wherein n=3-24 and R^3 and R^4, same or different, are a [[C_3-C_{24}]]C_6-C_{24} alkyl radical, straight chain or branched;

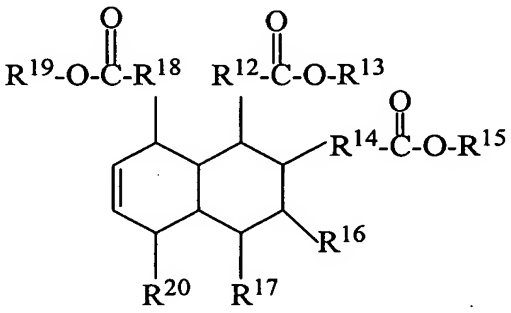


(III)

wherein R^5 and R^7, same or different, are a C_3-C_{24} hydro carbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^6 and R^8, same or different, are a C_3-C_{24} alkyl radical, straight chain or branched; and

R^{10} and R^{11}, same or different, are a C_3-C_{24}, saturated hydrocarbon chain, straight chain or branched; or an unsaturated C_3-C_{24}, hydrocarbon chain, straight chain or branched, having 1 to 6 carbon-to-carbon double bonds;



(IV)

wherein R^{12}, R^{14} and R^{18}, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^{13}, R^{15} and R^{19}, same or different, are C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

R^{16}, R^{17} and R^{20}, same or different, are C_3-C_{24} saturated hydrocarbon chain, straight chain or branched; or unsaturated C_3-C_{24} hydrocarbon chain, straight chain or branched, containing 1 to 6 carbon-to-carbon double bonds.

55. (Original) The method of claim 54, wherein the substrate is a ceramic substrate.

56. (Original) The method of claim 54, wherein the substrate is a glass substrate.

57. (Original) The method of claim 54, wherein the substrate is a metal flat stock material.

58. (Original) The method of claim 54, wherein the substrate is a polymeric substrate.

59. (Original) The method of claim 54, wherein the substrate is a cementitious substrate.

60. (Original) The method of claim 59, wherein the substrate is a concrete substrate.

61. (Original) The method of claim 54, wherein the substrate is an asphaltic substrate.

62. (Currently Amended) The method of claim 54, wherein the adding comprises adding a liquid comprising the adhesive resin and the ester having Formula [[I, II,]]III, IV, or mixtures thereof, and the liquid is selected from the group consisting of a solvent solution and a water-based emulsion.

63. (Original) The method of claim 62, wherein the liquid is a solvent solution comprising 2-ethylhexyl alcohol.

64. (Currently Amended) The method of claim 62, wherein the liquid is a solvent solution further comprising a reactive diluent in an amount of about 0.5% to about 50% by weight, based on the total weight of the adhesive resin and the ester having Formula [[I, II,]] III, IV, or mixtures thereof.

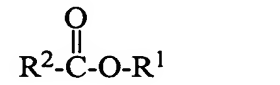
65. (Original) The method of claim 64, wherein the reactive diluent is a monomer selected from the group consisting of (1) a glycidyl ether; (2) a diglycidyl ether; (3) an aliphatic, straight chain epoxide; (4) an epoxidized vegetable oil; (5) a cycloaliphatic epoxy; (6) a glycidyl ester; (7) a diglycidyl ester; and any combination thereof.

66. (Original) The method of claim 54, wherein the adding comprises adding a mixture of the adhesive resin and the ester having Formula I, II, III, IV, or mixtures thereof, and a solid, inert carrier.

67. (Original) The method of claim 66, further comprising heating the mixture to a temperature between about 50°C and about 200°C before adding the mixture.

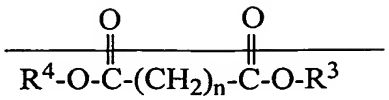
68. (Currently Amended) The method of claim 54, wherein the adding comprises coating the substrate with a solution comprising the ester having Formula [[I,]]II, III, IV, or mixtures thereof.

69. (Currently amended) A method of adhering a sealant composition to a ceramic, glass, metal, polymeric, cementitious, or asphaltic substrate, said sealant composition comprising a sealant and ~~an ester~~ a combination of esters having formula I, [[II,]]III, and IV, ~~or mixtures thereof,~~ the method comprising coating the substrate with a liquid containing an adhesive resin to form a coated substrate; and applying the sealant composition to the coated substrate:

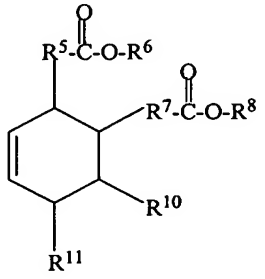


(I)

wherein R^1 is a C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; R^2 is a C_3-C_{24} saturated fatty acid residue, or an unsaturated fatty acid residue having 1 to 6 carbon-to-carbon double bonds;



~~wherein n=3-24 and R^3 and R^4, same or different, are a C_3-C_{24} alkyl radical, straight chain or branched;~~

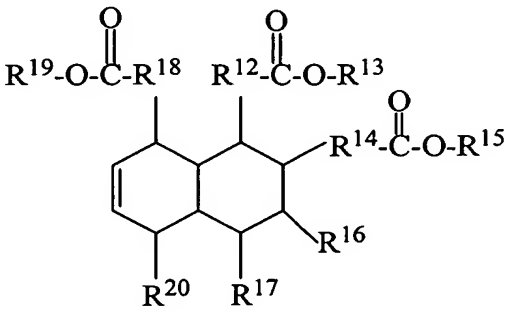


(III)

wherein R^5 and R^7, same or different, are a C_3-C_{24} hydro carbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^6 and R^8, same or different, are a C_3-C_{24} alkyl radical, straight chain or branched; and

R^{10} and R^{11}, same or different, are a C_3-C_{24}, saturated hydrocarbon chain, straight chain or branched; or an unsaturated C_3-C_{24}, hydrocarbon chain, straight chain or branched, having 1 to 6 carbon-to-carbon double bonds;



(IV)

wherein R^{12}, R^{14} and R^{18}, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^{13}, R^{15} and R^{19}, same or different, are C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

R^{16}, R^{17} and R^{20}, same or different, are C_3-C_{24} saturated hydrocarbon chain, straight chain or branched; or unsaturated C_3-C_{24} hydrocarbon chain, straight chain or branched, containing 1 to 6 carbon-to-carbon double bonds.

70. (Original) The method of claim 69, wherein the substrate is a ceramic substrate.

71. (Original) The method of claim 69, wherein the substrate is a glass substrate.

72. (Original) The method of claim 69, wherein the substrate is a metal flat stock material.

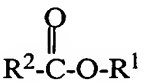
73. (Original) The method of claim 69, wherein the substrate is a polymeric substrate.

74. (Original) The method of claim 69, wherein the substrate is a cementitious substrate.

75. (Original) The method of claim 74, wherein the substrate is a concrete substrate.

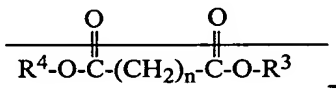
76. (Original) The method of claim 69, wherein the substrate is an asphaltic substrate.

77. (Currently amended) A sealant composition comprising a sealant; and ~~an ester~~ a combination of esters having formula I, [[II,]]III, and IV ~~or a combination of any two or more of said esters~~ in an amount of about 0.1% to about 15% by weight, based on the weight of the sealant in the sealant composition:



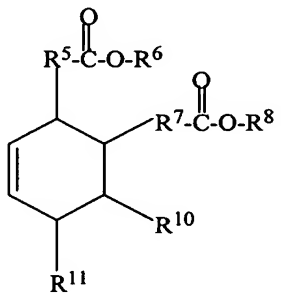
(I)

wherein R^1 is a C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; R^2 is a C_3-C_{24} saturated fatty acid residue, or an unsaturated fatty acid residue having 1 to 6 carbon-to-carbon double bonds;



~~(II)~~

~~wherein n=3-24, and R^3 and R^4, same or different, are a C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds;~~

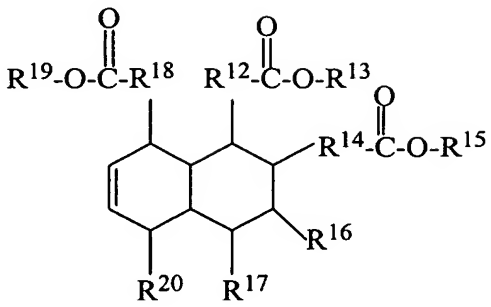


(III)

wherein R^5 and R^7, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^6 and R^8, same or different, are C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

R^{10} and R^{11}, same or different, are a C_3-C_{24}, saturated hydrocarbon chain, straight chain or branched; or an unsaturated C_3-C_{24}, hydrocarbon chain, straight chain or branched, having 1 to 6, carbon-to-carbon double bonds;



(IV)

wherein R^{12}, R^{14} and R^{18}, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^{13}, R^{15} and R^{19}, same or different, are a C_3-C_{24} alkyl, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

R^{16}, R^{17} and R^{20}, same or different, are a C_3-C_{24} saturated hydrocarbon chain, straight chain or branched; or unsaturated C_3-C_{24} hydrocarbon chain, straight chain or branched, containing 1 to 6 carbon-to-carbon double bonds.

78. (Original) The sealant composition of claim 77, further comprising an adhesive resin.

79. (Original) The sealant composition of claim 78, wherein the adhesive resin is a condensation product of a methylene acceptor and a methylene donor.

80. (Original) The sealant composition of claim 79, wherein the adhesive resin is selected from the group consisting of phenol-formaldehyde, melamine-formaldehyde; naphthol-formaldehyde; polyepoxide; a reaction product of triallyl cyanurate, resorcinol, and formaldehyde; a reaction product of p-chlorophenol, resorcinol, and formaldehyde; a copolymer of styrene, butadiene, and 2-vinylpyridine; and mixtures thereof.

81. (Canceled).

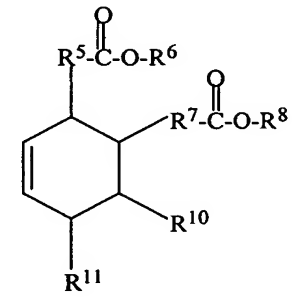
82. (Currently amended) The sealant composition of claim 1[[81]], wherein the ester is a reaction product of a C_3-C_{24} alcohol straight chain or branched, saturated or unsaturated having 1 to 3 carbon-to-carbon double bonds, with a dimer acid having CAS #61788-89-4.

83. (Original) The sealant composition of claim 82, wherein the alcohol is 2-ethylhexyl alcohol.

84. (Original) The sealant composition of claim 82, wherein the alcohol is a tridecyl alcohol.

85. (Original) The sealant composition of claim 82, wherein the alcohol is an oleyl alcohol.

86. (Currently amended) [[The]]A sealant composition ~~of claim 77, wherein the ester is a~~ comprising a sealant and a combination of ester compounds having formula [[II,]]III, and IV

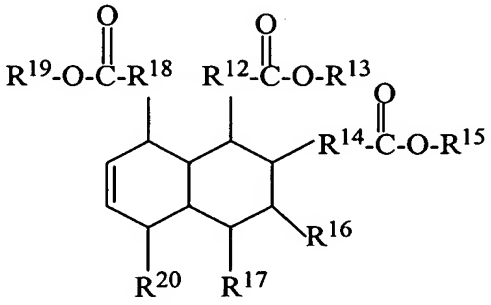


(III)

wherein R^5 and R^7, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^6 and R^8, same or different, are C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

R^{10} and R^{11}, same or different, are a C_3-C_{24}, saturated hydrocarbon chain, straight chain or branched; or an unsaturated C_3-C_{24}, hydrocarbon chain, straight chain or branched, having 1 to 6, carbon-to-carbon double bonds;



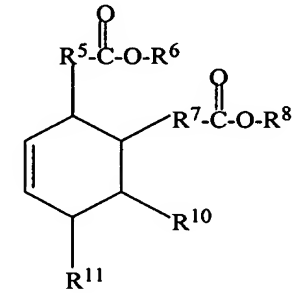
(IV)

wherein R^{12}, R^{14} and R^{18}, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^{13}, R^{15} and R^{19}, same or different, are a C_3-C_{24} alkyl, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

R^{16}, R^{17} and R^{20}, same or different, are a C_3-C_{24} saturated hydrocarbon chain, straight chain or branched; or unsaturated C_3-C_{24} hydrocarbon chain, straight chain or branched, containing 1 to 6 carbon-to-carbon double bonds.

87. (Currently amended) [[The]]A sealant composition ~~of claim 77, wherein the ester has~~ comprising a sealant and an ester having formula III



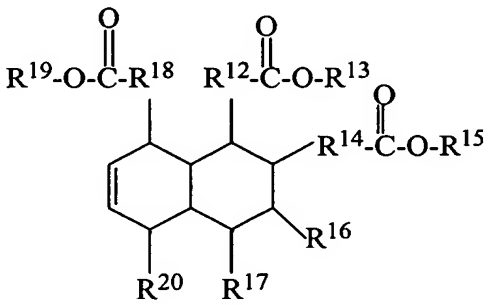
(III)

wherein R^5 and R^7, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^6 and R^8, same or different, are C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

R^{10} and R^{11}, same or different, are a C_3-C_{24}, saturated hydrocarbon chain, straight chain or branched; or an unsaturated C_3-C_{24}, hydrocarbon chain, straight chain or branched, having 1 to 6, carbon-to-carbon double bonds.

88. (Currently amended) [[The]]A sealant composition ~~of claim 77, wherein the ester has~~ comprising a sealant and an ester of formula IV



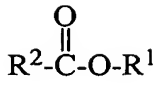
(IV)

wherein R^{12}, R^{14} and R^{18}, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^{13}, R^{15} and R^{19}, same or different, are a C_3-C_{24} alkyl, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

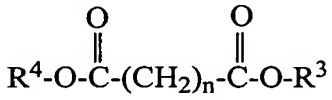
R^{16}, R^{17} and R^{20}, same or different, are a C_3-C_{24} saturated hydrocarbon chain, straight chain or branched; or unsaturated C_3-C_{24} hydrocarbon chain, straight chain or branched, containing 1 to 6 carbon-to-carbon double bonds.

89. (New) A method of adhering a sealant composition to a cementitious, substrate, said sealant composition comprising a sealant and an ester having formula I, II, III, IV, or mixtures thereof, the method comprising coating the substrate with a liquid containing an adhesive resin to form a coated substrate; and applying the sealant composition to the coated substrate:



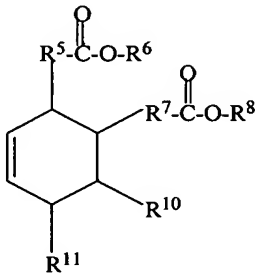
(I)

wherein R^1 is a C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; R^2 is a C_3-C_{24} saturated fatty acid residue, or an unsaturated fatty acid residue having 1 to 6 carbon-to-carbon double bonds;



(II)

wherein n=3-24 and R^3 and R^4, same or different, are a C_3-C_{24} alkyl radical, straight chain or branched;

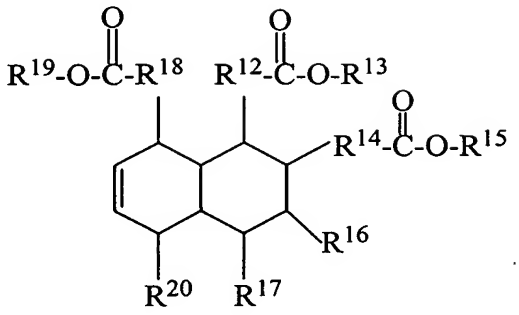


(III)

wherein R^5 and R^7, same or different, are a C_3-C_{24} hydro carbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^6 and R^8, same or different, are a C_3-C_{24} alkyl radical, straight chain or branched; and

R^{10} and R^{11}, same or different, are a C_3-C_{24}, saturated hydrocarbon chain, straight chain or branched; or an unsaturated C_3-C_{24}, hydrocarbon chain, straight chain or branched, having 1 to 6 carbon-to-carbon double bonds;



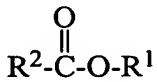
(IV)

wherein R^{12}, R^{14} and R^{18}, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^{13}, R^{15} and R^{19}, same or different, are C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

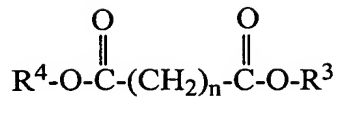
R^{16}, R^{17} and R^{20}, same or different, are C_3-C_{24} saturated hydrocarbon chain, straight chain or branched; or unsaturated C_3-C_{24} hydrocarbon chain, straight chain or branched, containing 1 to 6 carbon-to-carbon double bonds.

90. (New) A method of adhering a sealant composition to a concrete substrate, said sealant composition comprising a sealant and an ester having formula I, II, III, IV, or mixtures thereof, the method comprising coating the substrate with a liquid containing an adhesive resin to form a coated substrate; and applying the sealant composition to the coated substrate:



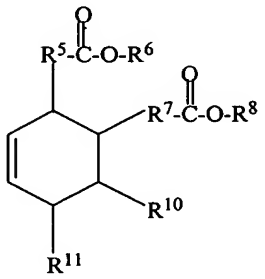
(I)

wherein R^1 is a C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; R^2 is a C_3-C_{24} saturated fatty acid residue, or an unsaturated fatty acid residue having 1 to 6 carbon-to-carbon double bonds;



(II)

wherein n=3-24 and R^3 and R^4, same or different, are a C_3-C_{24} alkyl radical, straight chain or branched;

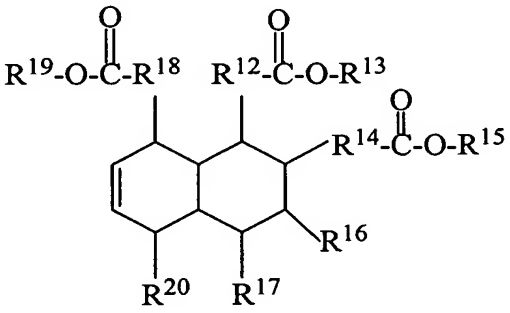


(III)

wherein R^5 and R^7, same or different, are a C_3-C_{24} hydro carbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^6 and R^8, same or different, are a C_3-C_{24} alkyl radical, straight chain or branched; and

R^{10} and R^{11}, same or different, are a C_3-C_{24}, saturated hydrocarbon chain, straight chain or branched; or an unsaturated C_3-C_{24}, hydrocarbon chain, straight chain or branched, having 1 to 6 carbon-to-carbon double bonds;



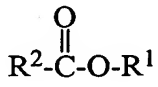
(IV)

wherein R^{12}, R^{14} and R^{18}, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^{13}, R^{15} and R^{19}, same or different, are C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

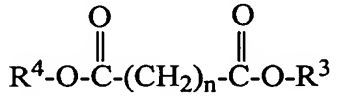
R^{16}, R^{17} and R^{20}, same or different, are C_3-C_{24} saturated hydrocarbon chain, straight chain or branched; or unsaturated C_3-C_{24} hydrocarbon chain, straight chain or branched, containing 1 to 6 carbon-to-carbon double bonds.

91. (New) A method of adhering a sealant composition to an asphaltic substrate, said sealant composition comprising a sealant and an ester having formula I, II, III, IV, or mixtures thereof, the method comprising coating the substrate with a liquid containing an adhesive resin to form a coated substrate; and applying the sealant composition to the coated substrate:



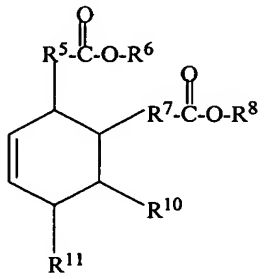
(I)

wherein R^1 is a C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; R^2 is a C_3-C_{24} saturated fatty acid residue, or an unsaturated fatty acid residue having 1 to 6 carbon-to-carbon double bonds;



(II)

wherein n=3-24 and R^3 and R^4, same or different, are a C_3-C_{24} alkyl radical, straight chain or branched;

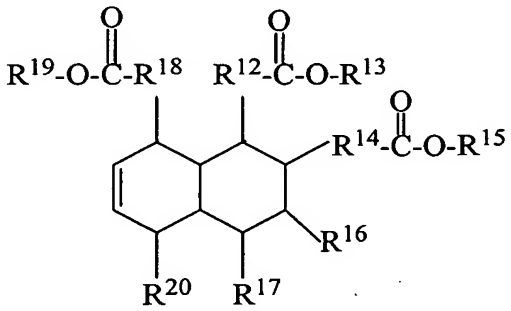


(III)

wherein R^5 and R^7, same or different, are a C_3-C_{24} hydro carbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^6 and R^8, same or different, are a C_3-C_{24} alkyl radical, straight chain or branched; and

R^{10} and R^{11}, same or different, are a C_3-C_{24}, saturated hydrocarbon chain, straight chain or branched; or an unsaturated C_3-C_{24}, hydrocarbon chain, straight chain or branched, having 1 to 6 carbon-to-carbon double bonds;



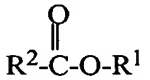
(IV)

wherein R^{12}, R^{14} and R^{18}, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^{13}, R^{15} and R^{19}, same or different, are C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

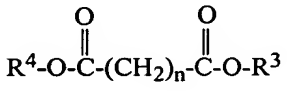
R^{16}, R^{17} and R^{20}, same or different, are C_3-C_{24} saturated hydrocarbon chain, straight chain or branched; or unsaturated C_3-C_{24} hydrocarbon chain, straight chain or branched, containing 1 to 6 carbon-to-carbon double bonds.

92. (New) A sealant composition comprising a sealant; and a combination of esters having formula II, III, and IV in an amount of about 0.1% to about 15% by weight, based on the weight of the sealant in the sealant composition:



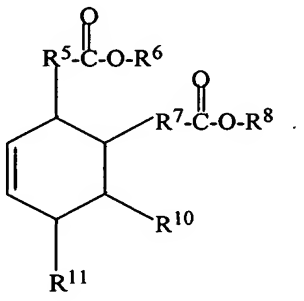
(I)

wherein R^1 is a C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; R^2 is a C_3-C_{24} saturated fatty acid residue, or an unsaturated fatty acid residue having 1 to 6 carbon-to-carbon double bonds;



(II)

wherein n=3-24, and R^3 and R^4, same or different, are a C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds;

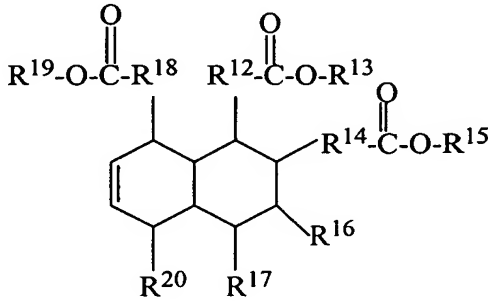


(III)

wherein R^5 and R^7, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^6 and R^8, same or different, are C_3-C_{24} alkyl radical, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

R^{10} and R^{11}, same or different, are a C_3-C_{24}, saturated hydrocarbon chain, straight chain or branched; or an unsaturated C_3-C_{24}, hydrocarbon chain, straight chain or branched, having 1 to 6, carbon-to-carbon double bonds;



(IV)

wherein R^{12}, R^{14} and R^{18}, same or different, are a C_3-C_{24} hydrocarbon chain, straight chain or branched, either saturated or having 1 to 6 carbon-to-carbon double bonds;

R^{13}, R^{15} and R^{19}, same or different, are a C_3-C_{24} alkyl, straight chain or branched, saturated or unsaturated containing 1 to 3 carbon-to-carbon double bonds; and

R^{16}, R^{17} and R^{20}, same or different, are a C_3-C_{24} saturated hydrocarbon chain, straight chain or branched; or unsaturated C_3-C_{24} hydrocarbon chain, straight chain or branched, containing 1 to 6 carbon-to-carbon double bonds.

93. The sealant composition of claim 92, further comprising an adhesive resin.